Skripsi, Februari 2021
Siti Naimmatur Rahma
050117A099

Kajian Potensi Ekstrak Kasar Dan Fraksi Daun Pandan Wangi (*Pandanus amaryllifolius* Roxb) Sebagai Antihiperglikemia Dengan Metode In Vitro Dan In Vivo

ABSTRAK

Latar Belakang : hiperglikemia merupakan suatu keadaan tingginya kadar gula darah pada tubuh yang melebihi batas normal. Hiperglikemia yang tidak terkontrol dapat menyebabkan hiperosmolaritas, ketoasidosis diabetic dan kemolakto asidosis. Sehingga diperlukan adanya alternative pengobatan secara herbal seperti daun pandan wangi (Pandanus amaryllifolius Roxb) memiliki metabolit sekunder berupa flavonoid, alkaloid, saponin, dan fenol yang berfungsi sebagai antihiperglikemia.
Tujuan : Mengkaji potensi ekstrak kasar daun pandan wangi dan fraksinya sebagai antihiperglikemia dengan metode in vitro dan in vivo.
Metode : Penelitian ini merupakan jenis penelitian non experimental secara in vitro dan in vivo. Uji aktivitas antihiperglikemia dilakukan dengan secara in vitro dilakukan dengan metode α-glukosidase dan in vivo pada hewan uji.
Hasil Penelitian : Hasil ekstrak kasar daun pandan wangi dan fraksinya secara in vitro terbaik diperoleh pada nilai IC_{50} sebesar 0,07757 mg/ml dan nilai EC_{50} sebesar 0,90 mg/ml. Secara in vivo hasil terbaik penurunan kadar glukosa darah yaitu pada ekstrak kasar n-heksan dosis 300 mg/ml dengan kadar glukosa 115 mg/dl dalam waktu pengamatan 180 menit.
Kesimpulan : Ekstrak kasar yang berpotensi sebagai antihiperglikemia terbaik adalah ekstrak etil asetat. Fraksi terbaik yang berpotensi sebagai antihiperglikemia adalah fraksi etil asaetat.

Kata Kunci : Ekstrak daun pandan wangi, hiperglikemia, In vitro, In vivo, IC_{50}, $EC_{50,}$ α-glukosidase, antioksidan.

Ngudi Waluyo University
S1 Pharmacy Study Program, Faculty of Health
Final Project, February 2021
Siti Naimmatur Rahma
050117A099

Study on the Potential Antigyperglicemic of Pandanus amaryllifolius Roxb Leaf Extract and Fraction Using In Vitro and In Vivo Methods.

ABSTRACT

Background : hyperglycemia is a condition when the blood sugar levels in the body exceeds the normal limits. Hyperglycemia that is not controlled can cause hyperosmolarity, diabetic ketoacidosis and chemolactic acidosis. So, it is necessary to have alternative herbal treatments such as pandan leaves (*Pandanus amaryllifolius* Roxb) which have secondary metabolites in the form of flavonoids, alkaloids, saponins, and antioxidant activity that has function as antihyperglycemic.
Objective : To asses the potency of pandan leaves crude extract and its faction as an antyhyperglycemic using in vitro and in vivo methods.
Methods : This study is a non-experimental research type, a literature review article on samples of pandan leaves extract and its fraction as an in vitro and in vivo antyhyperglycemic.
Results : The best in vitro crude pandan leaf extract and its fraction were obtained at an IC_{50} value of 0.07757 mg/ml and an EC_{50} value of 0.90 mg/ml. In vivo, the best results in lowering blood glucose levels were crude extract of n-hexane at a dose of 300 mg/ml with a glucose level of 115 mg/dl within 180 minutes of observation.
Conclusion : The crude extract which has the best potential as antihyperglycemic is ethyl acetate extract. The best fraction that has the potential as an antihyperglycemic is the ethyl acetate fraction.

Kata Kunci : Pandan leaves extract, hyperglycemic, In vitro, In vivo, IC_{50}, $EC_{50,}$ α-glucosidase, antioxidant.